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# Seasonal Gardening: Mandarin Oranges Part 2

## Health Standards Addressed

**Kindergarten: 1.1.N** Name a variety of healthy foods and explain why they are necessary for good health.

**1.2.N** Identify a variety of healthy snacks.

**7.1.N** Select nutritious snacks.

**First Grade: 1.3.G** Identify a variety of behaviors that promote healthy growth and development.

**Second Grade: 1.1.N** Name a variety of healthy foods and explain why they are necessary for good health.

**1.2.N** Identify a variety of healthy snacks.

**7.4.N** Examine the criteria for choosing a nutritious snack.

**Third Grade: 5.1.G** Examine why a variety of behaviors promote healthy growth and development.

**Fourth Grade: 1.1.N** Identify and define key nutrients and their functions.

**7.1.N** Practice how to take personal responsibility for eating healthy foods.

**Fifth Grade: 1.6.N** Differentiate between more-nutritious and less-nutritious beverages and snacks.

**5.1.N** Use a decision-making process to identify healthy foods for meals and snacks.

**7.1.N** Identify ways to choose healthy snacks based on current research-based guidelines.

**8.1.N** Encourage and promote healthy eating and increased physical activity opportunities at school and in the community.

## CCSS Math Standards Addressed

**SMP 1** Make sense of problems and persevere in solving them.

**SMP 2** Reason abstractly and quantitatively.

**SMP 3** Construct viable arguments and critique the reasoning of others.

**SMP 4** Model with mathematics.

**SMP 6** Attend to precision.



## Materials

Mandarin Oranges from Harvest of the Month (uncut), knife, student copies of Mandarin Orange article (optional, 3rd-5th)

## Success Skills

- **Collaboration** with their peers during their discussion of food and food choices.
- **Communication** of ideas with peers as students discuss the topic.
- **Creativity** as students illustrate and write about what they have learned about food and food choices.



## Challenging Question

How does learning about mandarin oranges add to what we know about the Seed to Table Cycle?

## (K-5) Access Prior Knowledge

- Remind students that food (vegetables and fruits) are grown and harvested.

**Review:** a fruit is the sweet and fleshy product of a tree or other plant that contains seed and can be eaten as food.



### Explore

#### Kindergarten and First Grade Explore

**Observe:** Look at this mandarin orange. (Hold up the fruit.)

**Ask:** Do you think there are any seeds in this mandarin orange?

- Have students estimate how many seeds are in the mandarin orange.
- Peel the mandarin orange. Divide the orange in half.

**Ask:** Do you see any seeds?

**Explain:** Most people eat mandarin oranges *raw*.

- Pass out a mandarin orange to every student.
- *Generate words* (Bubble map) students can use to describe the taste of mandarin orange.

**Ask:** What are some words that describe the taste of mandarin orange? How else could you describe the mandarin orange?

#### Kindergarten and First Grade Revision and Reflection

- In their response journals, have students draw a picture of the mandarin orange from the outside and from the inside as well.
- Have students respond to this prompt. How did the mandarin orange taste?
- Write the sentence: The mandarin orange tasted \_\_\_\_\_. Teachers can use a highlighter to write the words for students or students may write independently.

#### Second and Third Grade Explore

**Observe:** Look at this mandarin orange. (Hold up the fruit.)

**Ask:** Do you think there are any seeds in this mandarin orange?

- Have students estimate how many seeds are in the mandarin orange.
- Peel the mandarin orange. Divide the orange in half.



**Ask:** Do you see any seeds?

**Explain:** Most people eat mandarin oranges *raw*.

- Pass out a mandarin orange to every student.
- *Generate words* (Bubble map) students can use to describe the taste of mandarin orange.

**Ask:** What are some words that describe the taste of mandarin orange? How else could you describe the mandarin orange?

- If there are seeds, table groups should compare how many seeds are in their oranges.

## Second and Third Grade Revision and Reflection

Students respond to the following questions in their journals:

- Compare and contrast mandarin oranges and a regular orange. Use a Compare/Contrast (Double Bubble) to organize your thinking. Which would you prefer to eat?

## Fourth and Fifth Grade Explore

**Observe:** Look at this mandarin orange. (Hold up the fruit.)

**Ask:** Do you think there are any seeds in this mandarin orange?

- Have students estimate how many seeds are in the mandarin orange.
- Peel the mandarin orange. Divide the orange in half.

**Ask:** Do you see any seeds?

**Explain:** Most people eat mandarin oranges *raw*.

- Pass out a mandarin orange to every student.
- *Generate words* (Bubble map) students can use to describe the taste of mandarin orange.

**Ask:** What are some words that describe the taste of mandarin orange? How else could you describe the mandarin orange?

- If there are seeds, table groups should compare how many seeds are in their oranges.

## Fourth and Fifth Grade Revision and Reflection

Students respond to the following questions in their journals:

- Compare and contrast mandarin oranges and pears. Use a Compare/Contrast (Double Bubble) to organize your thinking. Explain the differences between the fruits. Use your notes from previous lessons to support your writing.



# What Are the Benefits of Mandarin Oranges?

Whether you call them mandarin oranges, tangerines or clementines, they're all different varieties that belong to the mandarin family. Mandarins are smaller than oranges and have a looser skin, which makes them easier to peel. Like all members of the citrus family, they provide a boost of vitamins and minerals, yet have few calories and not even 1 gram of fat.

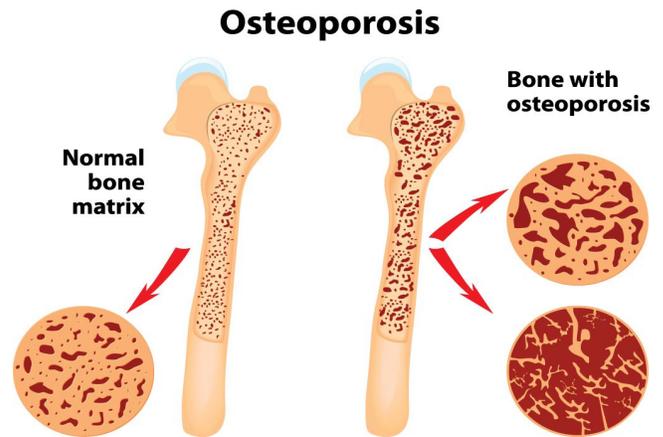
## Vitamin C

You can count on mandarin oranges to provide vitamin C, with 1 cup of orange segments delivering 28 percent of the recommended daily intake. Vitamin C is a powerful antioxidant that neutralizes free radicals, including those resulting from exposure to sunlight.



## Bone Health

Calcium and phosphorus combine to form hydroxyapatite, which is used to build bone and teeth. Old and damaged bone is continuously replaced with new, strong bone throughout your life. It's important to include both minerals as a part of your regular daily diet to have healthy bones. Magnesium is another mineral that has a role maintaining bone health by activating enzymes that form new bone. Dietary intakes of calcium are often below the recommended amount for many people of all ages, according to the Linus Pauling Institute. One cup of mandarin orange segments provides 3 percent of the recommended daily intake of all three minerals.



## Dietary Fiber

There are two types of dietary fiber that have different purposes. *Insoluble* fiber is the type known for keeping food moving through the digestive tract. The other type of dietary fiber, soluble fiber, lowers levels of cholesterol and keeps blood sugar balanced after you eat by slowing food absorption.

<http://healthyeating.sfgate.com/benefits-mandarin-oranges-4573.html>

